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MAGNUM GAS & POWER LIMITED – ACQUISITION UPDATE

MAGNUM ACQUISITION BOMBORA NATURAL ENERGY IN FARM-IN TO ALVARES GAS DISCOVERY

Highlights

- Bombora taking a 10% interest in a large, conventional, stranded gas discovery in the Sacramento Basin, California.
- Original 1982 well penetrated a minimum of 150m (500 feet) of gas saturated sandstone and conglomerate potential reservoir. High gas shows over a much larger, 1500m (4,815 feet) interval supports upside.
- The well was drilled for oil, but flowed pipeline-quality gas to surface on a pre-test.
- Bombora’s reservoir engineering evaluation based on conservative interpretation of core data indicates potential for flow rates of 4 to 10 MMCFD.
- Farm-in leases provide coverage of a large faulted anticline structure.
- Low applicable royalties and proximity to California gas trunklines will assist commerciality.
- Re-entry of original well bore to be examined which could significantly reduce drilling and testing costs.

Magnum Gas and Power (ASX: MPE) is pleased to announce that Bombora Natural Energy Pty Ltd (“Bombora”), the subject of MPE’s all scrip acquisition offer announced 13 February 2017 has farmed in to interests held by Sacgasco Limited (ASX: SGC) and Xstate Resources Limited (ASX: XST), in leases covering the Alvares Gas Discovery in the Northern Sacramento Basin, California.

The Alvares Gas Discovery

The Alvares-1 was drilled in 1982 on a large structure mapped on a grid of 2D seismic. Over 16 km² of structural closure is mapped by the Operator Sacgasco Limited. The farm-in leases are subject to gross royalties of less than 20% and located within 13 km of a major gas transport trunkline. The structure is a faulted anticline along the western margin of the Northern Sacramento Basin. This prominent structure is associated with the frontal fold of the California Coastal Ranges which generates large, tectonically stressed, thrust structures analogous to the frontal folds of the PNG highlands. To the east is the foreland basin terrain which hosts the traditional dry gas fields of the Northern Sacramento Basin where over 11 Tcf of gas has been produced to date. These easterly gas fields are hosted in younger rocks in less prominent structural and stratigraphic traps.

Alvares-1 was drilled within the mapped structural closure to a total depth of 4380m (14,060 feet) to test the Early Cretaceous age, Stoney Creek Formation targeting at the time, oil. This formation is part of an early, marine basin fill and is comprised of sandstones and conglomerates interspersed with clay rich rocks. Wireline log data from the well indicates extensive zones with conventional gas reservoir potential.
Alvares-1 encountered high pressures, along with strong gas shows recorded over more than 1500m (4,815 feet) below a thick, sealing shale at 2531m (8304 feet). High mud weights up to 17.7 pound per gallon were required to control the well with mud gas readings peaking at 10,000 units. Unfortunately, operational issues resulted in an incomplete suite of wireline log data with which to evaluate the results.

Bombora interprets a minimum of 3 clear, gas saturated zones totalling almost 150 m (500 feet) based on the mudlog shows and where available, wireline log and testing data. Given the mapped 16km² trap size, a large gas resource is indicated. If the more extensive gas shows recorded relate to additional zones of gas saturation, then there could be potential for a much larger gas resource. An example of one of the gas saturated zones as interpreted by Bombora is shown in Figure 1. The base of the interpreted 42m (138 feet) gas column in this interval may simply be the base of the sandy section filled with gas. The zone was not tested.

**Figure 1: Mudlog section from Alvares-1 showing an interpreted gas column corresponding to a sandy potential reservoir zone.**

An open-hole drill stem test over an arbitrarily selected interval from 10,421 to 10,460 feet failed, but flowed dry gas to surface at a calculated rate of 0.4MMCFD, without stimulation on a pre-test flow. The test proper failed due to high instantaneous pressure flow into the well bore damaging the test equipment.

Importantly, the gas recovered is interpreted to be similar in quality to pipeline quality gas produced from younger intervals in the Sacramento Basin.
A 14 feet core cut on resumption of drilling below the test interval had measured porosities in the range of 5% up to 17% and permeabilities of 2-56 millidarcies. Bombora conducted reservoir engineering analysis of the test pressure data and wireline log data, matched to a more conservative range of core porosities (5 to 10.5%) and permeabilities (2-5 mD). As shown in Figure 2, this analysis indicates the tested section should conservatively have been capable of natural flow ranging from 4 MMCFD and up to 10 MMCFD, depending on the net thickness of effective reservoir.

![Figure 2: Plot of potential natural gas flow ranges for the “10,400 Feet Zone” based on analysis of test data, wireline log and conservative selection of core information in Alvares-1.](image)

After reaching total depth the well was subjected to limited, valid cased-hole tests without meaningful results. This was mainly due to mechanical issues that largely prevented effective testing of the gas zones.

The key risk associated with the project, is execution of a drilling and completion program that minimises damage to the reservoirs and allows for effective flow testing of the rocks. Bombora believes that with careful well planning, application of modern techniques and equipment commonly used in similar geologic settings, an Alvares-2 well has a high probability of commercial success.
Key 2017 drilling to impact Alvares

The Alvares Joint Venture does not have a licence-required commitment to drill the well and has the opportunity to make a decision after reviewing information obtained from other relevant drilling programs in the Sacramento Basin that are planned for 2017. These planned wells are on the Dempsey structure to the east and a follow up well to the Tulainyo gas discovery on geological trend south of Alvares. Bombora has signed agreements to participate in both projects that will also target the productive potential of conventional reservoirs in a petroleum system that is older than, and generally lies beneath the traditional gas productive zones in the region. Bombora believes the gas in the younger productive sequences in the Northern Sacramento Basin is generated from within this underlying petroleum system. Refer to Figure 3.

Figure 3: Location Map of the Sacramento Basin Gas Province and Bombora Planned Gas Projects.

Strong California Gas Market

There is an enormous gas market in California with some 90% of the approximately 7 Bcf/day demand imported from Canada and other states. This results in gas prices at a premium to the Henry Hub, USA natural gas pricing benchmark. Bombora believes that if commercial rates of flow can be established in the well that the project will be able to be quickly commercialised.

Alvares-1 Re entry

The Alvares Joint Venture is currently examining the feasibility of re-entering the Alvares-1 well with a workover rig. This would be to determine if the wellbore can be utilised to either retest selected gas
zones through casing, or alternately, determine if the well can be side-tracked instead of requiring a more expensive new well from the surface. Further information about this potential course of action will be announced once the Alvares-1 well re-entry is more fully investigated.

**Principal terms**

Bombora will pay to the Farmers within 30 days of the option exercise date US$20,000 (approximately A$26,000) toward past lease rentals and will earn a 10% working interest by funding 13.33% of the next well to test the 1982 Alvares Gas Discovery. Bombora’s promoted share of funding the Alvares-2 will be limited to a gross cost cap of US$10 million (approximately A$13 million, the “Cost Cap”). At a well cost equivalent to the Cost Cap this could represent a cost exposure of approximately A$1.75 million. If the Cost Cap is reached, thereafter Bombora would contribute to costs pro rata according to its 10% earned interest. Bombora would also fully earn in the project having paid 13.33% of costs if the gross cost of the Alvares-2 is less than the Cost Cap.

Bombora estimates that in the current competitive environment for rig and other drilling services, the well costs for an Alvares-2 could be reduced to circa 50% of the Cost Cap. In the event that the joint venture is able to re-enter the original borehole and sidetrack, then this would also count as the farm-in well with potential to further reduce costs.

After the Farm-in the Working Interests in the Alvares Gas Discovery will be:

- **Sacgasco Limited (ASX: SGC)** 69 % (Operator)
- **Bombora Natural Energy Pty Ltd** 10 %
- **Xstate Resources Limited (ASX: XST)** 21 %

**John Begg, Executive Chairman of Bombora and proposed future Executive Chairman of Magnum commented:**

“This is another project consistent with Bombora and Magnum’s strategy of pursuing already discovered gas near infrastructure and strong markets. We intend to conduct an up to date evaluation of the recoverable resource potential which clearly could be very large.

Again, it’s a project we have had our eye on for some time. It’s a strategic asset that could benefit greatly from the work of other joint venture activity in the greater play area. We believe that at the right time, application of modern drilling and completion techniques can be the critical success factor.

We have little concern about gas markets. California consumes on average 7Bcf of natural gas per day or 2.6Tcf per year, 90% of which it imports. The local gas price has recently been as high as US$4/Mcf”.

Yours faithfully,

Ellen O’Neil
Company Secretary